

Notice of Allowability

Application No.

10/777,719

Examiner

LINH BLACK

Applicant(s)

ADKINS ET AL.

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2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/9/07.
2. ☒ The allowed claim(s) is/are 1-6, 8-24 (Renumbered as 1-23).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

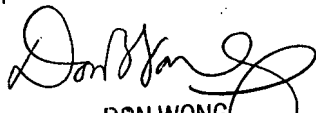
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Gerald H. Glanzman on July 18, 2007.

The application has been amended as follows:

The claims have been amended as follows:

In the claims document dated 10/3/06,

Cancel: claim 7

For claims 1, 12, 18, and 24, after "writing metadata describing...the snapshot was created", **replace: "; and" by ", and"**

Add: "wherein the writing further comprises writing an in-use state of snapshot map entries for a snapshot map group to the snapshot image prior to any

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before-image data blocks referenced by the snapshot map group being written to the snapshot image; and"

The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach the limitations of independent claims 1, 12, 18, and 24, particularly: " writing an in-use state of snapshot map entries for a snapshot map group to the snapshot image prior to any before-image data blocks referenced by the snapshot map group being written to the snapshot image", is not found in the prior art of record.

Federwishch et al. (US 7039663) teach snapshot updates – col. 4, first paragraph; header segment – col. 6 – lines 4-36; metadata and incremental snapshot – col. 12, lines 32-39; col. 15, lines 13-26; entry for each inode on the source snapshot – col. 21, lines 5-31.

Kleinschnitz., JR. et al. (US 20030191911) teach update snapshot – paragraph 3; image metadata – par. 0066; " active state" of a fully imaged computer – par. 0110.

Edwards (US 20030182389) teaches active map, summary map, and snap maps – fig. 6; paragraphs 43-44 (the active map is a data structure that is utilized by the file system to track which blocks are used by the active file system, thus, Examiner interprets

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Edwards' "active map" equivalent to the Applicants' "in-use state of snapshot map entries").

Dependent claims 2-6, and 7-23 incorporate the listed limitations by reference and contain limitations that further distinguish over the art of record. For these reasons, claims 2-6, and 7-23 are considered allowable over the art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LINH BLACK
Examiner
Art Unit 21633

7/18/2007



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